

REMARKS

Reconsideration of the rejection of the subject matter of this application is requested.

Status of Claims

Claims 1-16 are presented for consideration. Claim 1 has been amended substantially to emphasize a main feature of the invention, i.e. that the encasement for the optical fiber bundle is a solid polymer that contacts and conformally encases the optical fiber bundle.

The Drawing

The drawing appears to be acceptable as filed.

Claim Objections

Claims 10 and 11 are objected to as not further limiting the claim (claim 3) on which they depend. Claim 3 recites either one of a. and b., and a. and b. are independent species. Claim 10 recites a. (and not b.) and claim 11 recites b. (and not a.). So in each case the claims further limit the scope of claim 3.

Claim 1 is objected to as lacking an article. Amended claim 1 overcomes this objection.

Claim Rejections

The rejections that are of record and intended to be responded to in this paper

are:

Claims 1-3, 6, and 9-15 stand rejected under 102(b) as anticipated by Keller et al.

Claims 4, 5, 7, 8, and 16 stand rejected under 103(a) as unpatentable over Keller et al.

Argument

Prior to addressing the rejection a brief summary of the invention may be helpful. The invention is directed to an optical fiber cable design in which the outer sheath of the cable is mechanically coupled to an optical fiber bundle within the cable. That coupling is made via a solid polymer conformal encasement that contacts the optical fiber bundle, whereby mechanical forces that act on the outside of the cable may be translated through the solid polymer encasement to the optical fibers in the optical fiber bundle.

Claim 1 has been amended to specify that the encasement is solid polymer. Support for that limitation may be found (inter alia) at the bottom of page 23 of applicants' specification. Claim 1 has also been amended to specify that the encasement contacts the optical fiber bundle. Support for that limitation is found in the first full paragraph on page 24 of the specification, and also in the figures. Claim 1 is further amended to specify that the encasement conformally encases the optical fiber bundle. Reference to conformal encasements may be found at the bottom of page 4, the top of page 8, and is implicit in the structures shown in the drawings.

Turning to the rejections on the Keller et al. patent, the Keller et al. cable is

specifically of the “loose fiber” design that applicants have described at p. 2, line 11, et seq. of their specification. Improvement of that design is a specific goal of the invention. That improvement involves deliberately coupling the optical fibers to the outer part of the cable. Claim 1 requires that the encasement contacts the optical fiber bundle, and conformally encases the optical fiber bundle. That leaves no space in the interior of the cable. The layer of material that is cited in the Office action as anticipating applicants’ encasement, i.e. layer 12 in the Keller et al. design, is a sheath of hard plastic that is clearly spaced from the optical fiber bundle. The space is filled with a water-blocking gel. According to Keller et al., col. 2, line 50,

“The gel 15 within the buffer tube 12 and surrounding the optical fiber ribbons¹⁶ is a thixotropic, water-blocking gel to prevent water ingress. The viscosity range of the gel 15 allows for the free movement of the optical fiber ribbons 16 over the operating temperature range of the cable 10.”

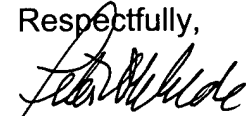
The gel in the cable of Keller et al. is not the same as, nor can it function as, applicants’ encasement. Applicants’ encasement is a solid polymer that contacts the optical fiber bundle so as to translate mechanical stresses to the optical fibers in the optical fiber bundle.

Since applicants’ claimed structure is opposite to the teachings of Keller et al., it is believed that applicants’ invention is not only different, but unobvious.

All claims pending depend from claim 1, and claim 1 clearly distinguishes in a fundamental way from the Keller et al. teachings. Accordingly it is believed that all claims are allowable.

In the event that the Examiner concludes that a telephone call would advance the prosecution of this application, the Examiner is invited and encouraged to call the undersigned attorney at Area Code 757-258-9018.

Respectfully,


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